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ENUMERATION AND DESCRIPTION OF THE SEPTORIAS OF NORTH AMERICA.

BY GEORGE MARTIN, M. D.

(Continued from page 41.)

28. **SEPTORIA CHIONANTHI**, Cke. Hedwigia, 1878, p. 38; Sylloge III, p. 496; Rav. F. A. N., 25.

Spots none or obliterated; perithecia dark or nearly black, subglobose, semi-immersed, clustered, numerous, hypophyllous, 100 *u* in diam.; sporules hyaline, linear, obtuse, 8 x 1—1½ *u*. On leaves of *Chionanthus Virginica*. South Carolina.

29. **SEPTORIA CIRRHOSA**, Winter. Journ. Mycol. I, p. 122.

"Spots scattered or confluent, subrotund or irregular, pale brown, whitish in the center, margin yellowish, indeterminate, seven millim. broad; perithecia amphigenous, loosely gregarious, semi-immersed, depressed-globose, opening by a broad pore, black, 100—130 *u* in diam.; sporules cylindrico-filiform, often flexuose, acute at both ends, hyaline, tinted with green, mostly 3—5-septate, 30—45 x 2—2½ *u*." On living leaves of *Staphylea trifolia*, Missouri.

30. **SEPTORIA CIRSII**, Niessl. Sylloge III, p. 550.

Spots brown dark gray in the center, subrotund, epiphyllous, 3—5 millim. broad; perithecia brown, membranaceous, innate, slightly prominent, scattered or "gregarious," 100 *u* in diam.; sporules hyaline, linear, straight or subflexuous, ends obtuse, "8—12 septate, 40—80 x 1½—2 *u*." On leaves of *Cirsium altissimum*, Delaware.

31. **SEPTORIA CONSIMILIS**, E. & M. Journ. Mycol. I, p. 100; Ellis, N. A. F., No. 1,602.

Spots brown, dead, irregular, ½—1 cm. in diam., border indefinite; perithecia brown, subglobose, innate, scattered, amphigenous, 90—100 *u*; sporules hyaline, filiform, multinucleate, slightly curved, ends obtuse, 30—45 x 2—2½ *u*. On cultivated lettuce, New York.

32. SEPTORIA CONSOCIA, Pk. Bot. Gaz. V, p. 34; Sylloge III, p. 521.

"Perithecia closely gregarious, amphigenous, black, 65—75 *u* in diam.; sporules filiform, nearly straight, 15—20 *u* long. On living and languishing leaves of *Polygala senega*, associated with an *Aecidium*." Michigan.

33. SEPTORIA COPTIDIS, B. & C. N. A. Fungi, 436; Sylloge III, p. 526.

"Spots reddish, with a red margin; sporules filiform, straight, 25 *u* long." On *Coptis*, Wisconsin.

34. SEPTORIA CORNICOLA, Desm. Sylloge III, p. 492.

Spots grey, nearly round, 4—5 millim. broad, border dark purple; perithecia dark brown, globose-depressed, scattered, mostly epiphyllous, 100—110 *u* in diam.; sporules hyaline, cylindrical, curved, 2—4-septate, 30—40 x 2—2½ *u*. On *Cornus*. Pennsylvania, Delaware and Missouri.

35. SEPTORIA CORYLINA, Pk. 34th Rep. S. Mus., p. 44; Sylloge III, p. 503.

"Spots suborbicular, scattered, brown or red brown, border grey-brown; perithecia few, minute, dark brown, very prominent, epiphyllous, sporules filiform, curved, hyaline, 38—45 *u* long." On *Corylus rostrata*. New York.

36. SEPTORIA CRYPTOTÆNIÆ, E. & Rau, n. s.

Spots white, thin, irregular, one millim. broad, border obsolete; perithecia brown, subglobose, very delicate, amphigenous, 90—95 *u* in diam.; sporules hyaline, tinted with green, cylindrical, ends slightly acute, curved, 24—30 x 1½ *u*. On *Cryptotænia Canadensis*. Pennsylvania.

37. SEPTORIA CUCURBITACEARUM, Sacc. Sylloge III, p. 527.

"Spots white, subcircular or slightly angular, dry; perithecia lenticular, with a broad aperture, 70—90 *u* in diam.; sporules narrowly vermicular, tortuous, 60—70 *u*, septate, hyaline." On languishing leaves of *Cucurbita*. North America.

38. SEPTORIA CURTISIANA, Sacc. Sylloge III, p. 561; *Septoria Tritici*, B. & Curt.

"Perithecia hysteriform in pallid spots on the stems; sporules slender." On culms of *Triticum*. Probably a *Rhabdospora*. Pennsylvania.

39. SEPTORIA DALIBARDÆ, Pk. 38th Rep. N. Y. S. Mus., p. 97; Ellis, N. A. F., No. 1,608.

Spots brown, subrotund, whitish or cinereous in the center; 1—2 millim. broad, border reddish-brown; perithecia black, subglobose, depressed, few in a spot, epiphyllous, 75—80 *u* in diam.; sporules hyaline, filiform, nearly straight, 45—60 x 1 *u*, "38—50 *u* long," Pk. Differs from *S. Woldsteiniæ* in the spores, which are much longer. On leaves of *Dalibarda repens*. New York.

40. SEPTORIA DENTARIÆ, Pk. 38th Rep. N. Y. S. Mus., p. 97.

Spots large, subcircular, indefinite, greenish; perithecia black, very delicate, slightly prominent, numerous, epiphyllous, 95—100 *u* in diam.; sporules hyaline, linear, nearly straight, 15—30 x 1 *u*, oozing out in yellowish or amber-colored threads. On leaves of *Dentaria diphylla*. New York.

41. SEPTORIA DIERVILLÆ, E. & E. Journ. Mycol. I, p. 44, March, 1885.

Spots dark brown, 2—3 millim. broad, border mostly thick, swollen, raised more on the upper surface, more or less shaded, purplish black; perithecia hypophyllous, small, black, innate, erumpent, 65—90 *u* in diam.; sporules hyaline, with a slight tint of green, filiform, often strongly curved, nucleolate, 25—35 x 1—1½ *u*. On *Diervilla trifida*. Massachusetts.

S. Diervillæ, Pk., 38th Rep. N. Y. State Mus., p. 98, is apparently the same, but the 38th Rep. was not given to the public till 1886.

42. SEPTORIA DIFFORMIS, C. & Pk. 29th Rep. N. Y. S. Mus., p 48; Sylloge III, p. 493.

"Spots suborbicular, brown; perithecia aggregated, black, amphigenous; sporules profuse, linear, straight or curved, hyaline, 15 *u* long, ejected in white or glaucous masses." On living leaves of *Vaccinium Pennsylvanicum*. New York.

43. SEPTORIA DOLICHI, B. & C., N. Am. Fungi, No. 449; Sylloge III, p. 509.

"Spots white, margin broad, yellow; sporules straight, subfusiform, 3-septate, 40 *u* long." On leaves of *Dolichos*. South Carolina.

44. SEPTORIA DRYINA, Cke. Grev. XII, p. 25; Sylloge III, p. 505, Rav., F. A., No. 783.

Amphigenous; spots orbicular, white, one millim. broad, border red, narrow; perithecia few, punctiform, black, 80—130 *u* in diam.; sporules linear, curved, plurinucleate, hyaline, 50—60 x·1½ *u*. On leaves of *Quercus falcata*. South Carolina.

45. SEPTORIA EMACULATA, Pk. & Clinton. N. Y. S. Rep.; Sylloge III, p. 510.

"Perithecia broad, scattered, prominent, black; sporules filiform, curved or flexuous, nucleolate, 50—87 *u* long." On living leaves and pods of *Lathyrus palustris*. New York.

46. SEPTORIA EQUISITI, Desm. Sylloge III, p. 576.

Spots light grey; oblong, 2 x 1 millim., sometimes confluent, border brown, narrow; perithecia few, scattered, flattened, very delicate or wanting, innate, covered, 250—500 *u* in diam.; sporules hyaline, subfusiform, 1—3-septate or pluriguttulate, mostly curved, 26—40 x 3—4 *u*, excluded in light, amber-colored masses. On *Equisetum*. Probably a *Phleospora*. Iowa.

47. SEPTORIA ERIGERONTIS, Pk. 24th Rep. N. Y. S. M., p. 87; Grev. III, p. 8; Sylloge III, p. 547; Ellis, N. A. F., No. 1,129.

Spots pallid to pale brown, round or irregular, 2—4 millim. broad, border brown, raised; perithecia black, subglobose, stomatous, clustered, prominent, epiphyllous, but visible on the under surface, 80—90 *u* in diam.; sporules hyaline, filiform, subflexuous, entire, 35—40 x 1½ *u*. New York. On *Erigeron; Septoria erigerontes*, Pk., No. 410 and *S. Erigerontis*, B. & C., No. 411; Sylloge III, p. 547, appear to be identical.

48. SEPTORIA EXAMINANS, B. & C. Grev. III, p. 8; Sylloge III, p. 483.

"Perithecia gregarious, punctiform, closely dotting portions of the whitened leaves; sporules filiform, flexuous, 25 *u* or more in length. On *Ilex*. North America.

49. SEPTORIA FLAGELLARIS, Ell. & Evrht. Bull. Torrey Bot. Club, X, p. 97; Ellis, N. A. F., No. 1,152.

Spots reddish-brown, subrotund, dry, becoming pallid in the center, 1—2 millim. in diam., border elevated; perithecia brown, sublenticular, innate, slightly prominent, epiphyllous, 80—120 *u* in diam., 1—3 in a spot; sporules hyaline, linear, attenuated towards one end, nucleolate or 4—8-septate, 35—120 x 1½—2 *u*. On leaves of *Calystigia sepium*. New Jersey. Differs from *S. convolvuli*, Desm., an *S. sepium*, Desm., in the size of the spores and color of the spots.

NOTE.—Among all the specimens of so-called "Septoria Fraxini," received from various parts of this country and as well as those distributed in various Exsiccati, we have never been able to find any with the characteristic sporules of *Septoria*. They are all about the same as those distributed in N. A. F., 743, as *Piggotia Fraxini*, B. & C., granular matter or small, imperfectly-developed sporules or spermatia and resembling very much the perithecia of a young or sterile *Sphaerella*, perhaps the early stage of growth of *Sphaerella convexula*, Schw.—EDS.

50. SEPTORIA FRAXINI, Desm. Sylloge III, p. 495; Rav. F. A., No. 24.

"Hypophyllous; perithecia minute, black, semi-innate, scattered in irregular spots; sporules cylindrical, ends truncate, nucleolate." On leaves of *Fraxinus*. Florida. My specimens in F. A. are sterile and of no value for description.

51. SEPTORIA FRUCTIGENA, B. & C. Grev. III, p. 10; Sylloge III, p. 558.

"Perithecia scattered, minute; sporules filiform, curved above, 35 *u* long." On bleached fruit of *Passiflora*. South Carolina.

52. SEPTORIA GALIORUM, Ellis. Bull. Torrey Bot. Club IX, p. 74; Sylloge III, p. 543; S. Galli, N. A. F., 745.

Perithecia black, punctiform, minute, scattered, shining; sporules hyaline, filiform, slightly curved, faintly septate, 18—25 x 1½ *u*. On dead stems of *Galium*.

53. SEPTORIA GAURINA, E. & Kellerman. Am. Nat. XVII, p. 1,165; Ellis, N. A. F., No. 1,133.

Spots light, dusky brown, rather irregular, border definite, slightly raised; perithecia numerous; brown; immersed, 100—140 *u* in diam., visible on both surfaces of the leaves, but expelling the sporulæ in white threads upon the upper; sporules linear, curved, yellowish, granular, continuous or 1—3-septate, 50—75 x 2½—3 *u*. On leaves of *Gaura paniflora*. Kansas.

54. SEPTORIA MACULOSA, Ger. Bull. Torr. Bot. Club IV, p. 64.

Spots grey or tawny, subcircular or elongated, three millim. broad; perithecia black, subglobose, innate, prominent, densely clustered in the center of the spot, epiphyllous, 84 *u* in diam.; sporules hyaline, filiform slightly curved, 25—40 x 1½ *u*. On leaves of *Cupbua viscosissima*. New York and Pennsylvania. This species appears to differ in the arrangement of the perithecia and in the size and appearance of the sporules from *S. maculosa*, Lev.; Sylloge III, p. 513.

(To be continued.)

NOTES ON THE BOLETI OF THE UNITED STATES.

BY CHAS. H. PECK.

Fries, in *Hymenomycetes Europæi*, gives descriptions of ninety species of *Boleti* and adds, in an appendix, the diagnoses of ten more whose affinities are doubtful. Almost as many species have been recorded for this country, and probably when they shall have been as thoroughly collected and studied here as they have been in Europe the number of United States species will exceed the number of the European.

Fries makes the remark, "Nullum genus quam Boletorum magis me molestavit:" "No genus has troubled me more than that of the Boleti;" and he indicates in the context that one cause of the trouble was the imperfect manner in which many species had been described. In my efforts to write a monograph of the American species, I have encountered the same difficulty and, unless more information can be obtained concerning some species than is afforded by the descriptions of them, it will be necessary to follow the example of Fries and add an appendix of species of doubtful affinity. Among these may be mentioned *B. betula*, Schw., *B. Murrnii*, B. & C., and *B. alboater*, Schw. Fries refers the first one to *B. parasiticus*, Bull., but the viscose pileus, the stem with a reticulated bark, separating like the bark of birches, and the habitat on lignose earth, cast a doubt on the accuracy of this reference. *B. Murraii* is said to have spores pale yellow, as in *P. castaneus*. This would indicate an affinity with the *Cariosi*, but the internal character of the stem is not indicated. If it shall prove to be stuffed or excavated, all doubt concerning its relationship will be removed.